Fact Sheet:

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THREATENED AND ENDANGERED SPECIES (TES) PROGRAM

The Problem

More than 950 species of plants and animals are protected under one of the most stringent environmental laws affecting Federal land -- the Endangered Species Act (ESA). As of December, 1996 199 Federally listed species resided on Army lands. As of December, 1994 another 140 exclusively State listed species are known or suspected to reside. In many cases, these lands have been protected from extensive development and exploitation that has resulted in habitat fragmentation, ecosystem dysfunction, and population declines elsewhere. Protection given species under the ESA, however, can constrain mission activities and impede land acquisition, thereby reducing defense readiness and jeopardizing lives. Furthermore, violations of ESA can result in lengthy and costly litigation that could lead to criminal and civil penalties and further constrain the mission. As the number of listed species increases, mission constraints and the management burden on military installations also increase. The Army's ability to address threatened and endangered species (TES) management requirements is limited because of inadequate information on: 1) the distribution, abundance, and status of TES on Army lands, 2) the effects of mission activities on TES and their individual or collective habitats within the ecosystem, and 3) mitigation and management options compatible with the mission.

The Technology

The U.S. Army Construction Engineering Research Laboratories' (CERL) Land Management Laboratory is conducting basic and applied research on TES in three major thrusts: inventory and monitoring, impact and risk assessment, and mitigation and management. These topic areas correspond to the highest priority conservation research and development (R&D) requirements identified by the Army's user community. They also correspond to the primary components of an ecosystem management approach to TES. The inventory and monitoring research thrust will provide integrated protocols, guidelines, and technologies to effectively document status and trends of TES on Army installations. Impact and risk assessment research will result in protocols, knowledge, and technologies to effectively document mission impacts on TES, focusing specifically on maneuver disturbance, smokes and obscurants, and noise. TES mitigation and management research will provide regional strategies, protocols, and guidelines to effectively balance mission requirements with TES conservation requirements. CERL is using a regionalized, "model" installation approach to TES product development and validation. This ensures the utility and rapid transfer of products to the field, and integration of the three research thrusts into an ecosystem-based, adaptive management framework that addresses ecological variability among regions. Presently, research efforts are focused on Fort Stewart, GA, representing the southeastern U.S., and Fort Hood, TX, representing the southern plains. We will expand to other regions as additional resources become available, and establish ties to related U.S. Army Corps of Engineers (USACE) land management research efforts.

Benefits/Savings

This research will provide Army-wide, U.S. Fish and Wildlife Service accepted capabilities to assess and monitor TES, objectively evaluate mission impacts, and develop realistic and practical approaches to accomplishing the mission in the presence of an ever increasing number of TES. Information, strategies, protocols, and guidelines developed will establish an objective basis for land

management decisions and for successful balancing of mission with ESA requirements. This research will achieve cost-savings by developing more efficient inventory and monitoring guidelines, and a multi-species management approach, and by providing greater training flexibility.

Status

The Army's priority research needs were identified in a comprehensive TES R&D strategy completed during FY94. This strategy provided guidance for R&D product development, technology transfer, and mechanisms for interagency coordination. Under the inventory and monitoring thrust several TES species tacking and information tools have been developed including BioTES, SSBI, and TRACKER. Guidelines for conducting biodiversity surveys have been published, and field studies are underway to validate TES inventory protocols. For our impact and risk assessment efforts, research protocols to assess effects of maneuver training on red-cockaded woodpeckers have been submitted to the U.S. Fish and Wildlife Service for review and field studies to assess maneuver impacts have been initiated on Fort Stewart. A"Risk Assessment Framework for Impacts of Military Training and Testing Activities on Natural and Cultural Resources" has been completed. Laboratory studies of toxicity of military obscurant smokes (fog oil) on avian species is near completion. In the mitigation and management thrust a regional guidebook for management of TES has been completed. Advanced modeling capabilities developed at CERL are being applied to evaluate management strategies for endangered avian species on Fort Hood. Future work across all thrust areas includes field validation and demonstration projects to evaluate an technology transfer Army-wide applications developed under the TES R&D program.

Points of Contact

CERL TES project leader is Mr. Tim Hayden, COMM 217-398-5220, ext. 609; toll-free 800-USA-CERL; FAX 217-373-4520; e-mail t-hayden@cecer.army.mil; or CERL, ATTN: CECER-LL-N, P.O. Box 9005, Champaign, IL 61826-9005.
Visit the CERL homepage at http://www.cecer.army.mil
